GRACE FISH HATCHERY
ANNUAL REPORT

October 1, 1989 to December 31, 1990

Prepared by

Arnie Miller, Fish Hatchery Superintendent II
Doug Burton, Fish Hatchery Superintendent I
John Lord, Fish Culturist

INTRODUCTION

Grace State Fish Hatchery was constructed in 1946 and is located eight miles south of the town of Grace, Caribou County, Idaho. The hatchery water supply consists of West and Middle Whiskey Creek Springs. Water temperature remains constant at 11° (52°F) year-round. Water flows vary from year to year and from month to month depending on winter snowpack and irrigation demands by local farmers. The region continues to experience drought conditions which have reduced water flows to the hatchery and impacted fish production.

Grace State Fish Hatchery stocked or shipped a total of 1,193,096 fish (161,529 lbs) during this period, including 227,165 8-inch plus rainbow trout, 657,465 rainbow from 3 to 8 inches, 2,850 rainbow less than 3 inches, 299,005 Bear Lake cutthroat trout from 5.5 to 6.2 inches, 5,823 splake (lake trout/brook trout hybrids) at 6 inches, and 788 lake trout at 5.9 inches (Table 1). Hatchery personnel also received and stocked 16,500 Lahontan cutthroat trout fingerling from Oregon and 380 rainbow broodstock from Ennis Hatchery, Montana. Approximately 567,000 rainbow and cutthroat trout (46,400 lbs) and 700,000 rainbow eggs were on hand at the end of the report period.

Three fish traps were operated during this period. One was on St. Charles Creek (a tributary of Bear Lake), one was on the Little Blackfoot River, and the third was on the main Blackfoot River. The purpose of the first two was to capture spawning adult Bear Lake cutthroat trout. The latter captured Yellowstone cutthroat and rainbow trout running out of Blackfoot Reservoir.

HATCHERY IMPROVEMENTS

The hatchery residences received most of the improvements, including a new garage, built by the Bureau of Engineering, for Residence 3, new carpets in both bedrooms of Residence 3 and in the living room and one bedroom of Residence 1, and a new water softener installed in Residence 3. The complete interior of Residence 1 was repainted, as were one bedroom and the entryway in Residence 3.

The major equipment purchases included a new 3/4-ton 4x4 pickup, a new table saw, and a new propane furnace for the hatchery shop. The old ice machine from Henrys Lake Hatchery was repaired and installed. The roof of the 7-stall shed was repaired and strengthened after it was blown off September 17, 1989. Some small changes were made to the new fish tank on the 2-ton truck, and overload springs were installed to make the truck safer. The remainder of the upper spring was fenced off and a water trough was installed for the landowner's livestock. This has improved the hatchery water quality by keeping cattle and horses out of the spring. The open flume running behind the hatchery office was covered over with plastic and chainlink. This will add some safety and keep water weeds from growing up, but is only temporary. A more permanent cover should be constructed in the future.

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Table 1. Fish requested and stocked from Grace State Fish Hatchery, October 1, 1989 through December 31, 1990.

Species	Size	Production requested	Actual produced	Percentage of goal achieved
Cutthroat (C5)	6-7 in.	305,000	299,005	98%
Rainbow (R1 & R8)	8+ in.	198,700	227,165[a]	114%
Rainbow (R1)	6-8 in.	250,000[b]	153,470	61%
Rainbow (R8 & R9)	6-8 in.	500,000	503,995°	101%
Rainbow (R1)	< 3 in.	0	2,850	
Lake Trout (MA)	6 in.	500	788	158%
Splake	3-4 in.	1,000	5,823	582%

[a]13,820 were planted in October, 1989. 213,345 were produced to achieve 107% of the 1990 request.
[b]Requested for fall stocking, 1989. Thirty-seven percent (92,144 fish) were stocked prior to October, 1989. Total stocked was 245,614 fish (98% of goal).
[c]Low water flow at the hatchery forced early stocking of 275,025 fingerling rainbow at 4-5 in.

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The Engineering Bureau completed construction of the new Blackfoot River fish trap. It operated for the first time from April to June 1990. Spring runoff was very low, yet the holding box was completely submerged for a short period. Alterations will be necessary if the trap is to operate in years with high runoff.

PUBLIC RELATIONS

An estimated 4,000 people visited the hatchery during the report period, including organized tours from Grace and Lava Hot Springs elementary schools, scout troops, and other groups. Many sportsmen use the hatchery as access for hunting and fishing on Whiskey Creek. Free Fishing Day included a fishing clinic organized and taught at the hatchery by Phil Cooper (Regional Wildlife Conservation Educator) and over 20 other Region 5 personnel. Children 13 years old and under were allowed to fish in the settling pond. One hundred and sixty-three people caught 272 fish, the largest being a 4 1/2-pound rainbow trout.

Bruce Thompson gave a telephone interview to the Logan Herald (Utah) on February 28, 1990. Hatchery personnel attended several public meetings to assist Larry LaBolle (Regional Fisheries Manager), Dan Schill, and Jim Mende (Regional Fisheries Biologists) inform the public about our activities in Region 5.

FISH HEALTH

Grace Hatchery was visited once by Keith Johnson (Resident Fishery Pathologist) to sample fingerling from the 1989 lot of Bear Lake cutthroat trout. Hatchery personnel also took tissue samples from brood rainbow and cutthroat trout captured at the Blackfoot River and Little Blackfoot River traps, and from fingerling rainbow trout on station. All samples were analyzed at the Eagle Fish Disease Laboratory. Results from these samples are presented in (Table 2).

Clinical diseases observed at Grace Hatchery were limited to BGD and coldwater disease. Both diseases were most significant among the rainbow trout fingerling, although coldwater disease was chronic in the Bear Lake cutthroat. Low summer water flows and high loading densities in the hatchery vats and small raceways reduced the quality of the re-use water and contributed to the BGD problem in the rainbow trout fingerling held in that water. Overall losses to bacterial gill disease from July through October totalled approximately 6,300 fish (about 2.8% of the effected groups). Most of this loss occurred during one major outbreak in July. Chloramine-T has proven to be a much safer and more effective therapy for BGD than cutrine and benzalkonium chloride, which were used extensively in the past.

Coldwater disease, caused by the bacterium Cytophaga psvchrophila, has historically been a chronic low-level problem at Grace Hatchery. Losses were more significant this year, possibly due to the prolonged low water situation and to the subsequent high loading densities. Sporadic outbreaks began about

Table 2. Grace Hatchery fish health report, October 1, 1989 to December 31, 1990. (Taken from Eagle Fish Health Laboratory, Fish Health Summary Reports).

Brood year	Stock	Species	Log #	Date	VH VP VE BK BF BR BC PX PW PC	Comments
1989	Little Blackfoot	Cutthroat (C5)	90-22	1/24	--	0/60 BK, VH, VP; 0/20 other
Brood	Blackfoot River	Rainbow (Rl)	90-103	4/17		0/9 BK, VH, VP
Brood	Blackfoot River	Rainbow (Rl)	90-107	4/24		0/23 BK, VH, VP
Brood	Blackfoot River	Rainbow (R1)	90-112	4/27		0/15 BK, VH, VP
Brood	Blackfoot River	Rainbow (Rl)	90-119	5/3		0/22 BK; 0/25 VH, VP
Brood	Little Blackfoot	Cutthroat (C5	90-136	5/15		0/3 viro
Brood	Little Blackfoot	Cutthroat (C5	90-137	5/23		0/31 BK, VH, VP
Brood	Little Blackfoot	Cutthroat (C5	90-146	5/24		0/59 BK, VH, VP
1990	Shep. of the Hills	Rainbow (R1)	90-147	6/5		3/3 BC (Romet resistant)
Brood	Little Blackfoot	Cutthroat (C5)	90-156	6/5		0/16 viro

-- = negative results
++ = positive results

VH - IHNV, infectious hematopoietic necrosis virus
VP - IPNV, infectious pancreatic necrosis virus
VE - EIBS, erythrocytic inclusion body syndrome virus
BK - bacterial kidney disease agent, Renibacterium salmoninarum
BF - bacterial furunculosis, Aeromonas salmonicida
BR - enteric red mouth bacterium, Yersinia ruckeri
BC - bacterial cold water disease, Cytophaga psychrophila or Flexibacter psychrophilis
PX - PXX, agent of PKD, proliferative kidney disease
PW - whirling disease agent, Myxobolus (Mxyosoma) cerebralis
PC - ceratomyxosis agent, Ceratomyxa shasta

the first of June among two lots of Shepard of the Hills strain (R8) rainbow trout fingerling. Oxytetracycline-medicated feed (TM-100) was given to all R8 fingerling on station with little success in inhibiting the outbreak. The disease seemed to run its course through all raceways of R8s with varying intensity throughout June and July. Total losses were approximately 8,000 fish (3.7%) in one infected lot and about 1,300 fish (1.7%) in the other lot. Chronic levels of the disease have continued to be observed in all lots.

FISH PRODUCTION

Most of the fish produced at Grace Hatchery begin as eyed eggs received from other hatcheries. Sources for eyed eggs included Hayspur State Fish Hatchery (IDFG), Bellevue, Idaho; Egan Fish Hatchery (Utah Division of Wildlife Resources), Bicknell, Utah; and Mantua Hatchery (UDWR), Mantua, Utah. Grace Hatchery also received one lot of Bear Lake cutthroat fry from Mantua Hatchery (Table 3). Green Bear Lake cutthroat eggs are obtained from the spawntaking operation on the Little Blackfoot River.

Grace State Fish Hatchery produced 157,269 pounds of fish from October 1, 1989 through December 31, 1990. The total hatchery budget for this period, excluding capital outlay, was approximately $206,500 (75% of the FY90 budget plus 50% of the FY91 budget). A breakdown of estimated total costs for each species and size of fish produced is given in (Table 4). The total cost to IDFG for each pound of fish produced was $1.31. The average cost per fish started and reared (not including fishes carried over from the previous report year) was $0.085.

A total of 210,899 lbs of fish feed were utilized at Grace Hatchery for an overall hatchery conversion of 1.34 lbs of feed for every 1 lb of fish produced. The total feed cost was $54,799.25, or $0.35 per pound of fish. A summary of feed use and cost by species is presented in (Table 5).

A significant factor affecting both production and fish health at Grace Hatchery has been the relationship between the months in which the hatchery has the most pounds of fish on hand and the total water flow pattern from the hatchery springs. Southeastern Idaho has experienced four years of below average precipitation. The aquifer in the Bear River Valley has been effected, resulting in reduced flows to the hatchery from Whiskey Creek Springs (Figure 1). Hatchery records show that water flows averaged only 59% of the 5-year pre-drought averages throughout 1990 (50% during the months of May through September). The hatchery typically holds the most pounds of fish on hand during the months of March through June in the form of catchable rainbow trout and large fingerling rainbow. The reduced water supply and corresponding increase in rearing densities have added stresses that predispose fish to disease.

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Table 3. Fish production at Grace Fish Hatchery, October 1, 1989 through December 31, 1990.

Species/ strain	Origin	Date received	Initial no. received	% hatch	Initial no. fry	Yield (size)	% survival
Rainbow/ Shep. of Hills--R8	Egan SFH, UT	01/28/88 a	235,500 eyed eggs	93%	219,000	158,868 (6-9"+)	67%
Rainbow/ R8	Egan SFH, UT	12/06/88 a	348,500 eyed eggs	96%	334,500	258,096 (6-9"+)	74%
Rainbow/ Ten Sleep R1	Egan SFH, UT	01/17/89 a	262,400 eyed eggs	94%	246,200	134,142 (6-9"+)	51%
Cutthroat/ Bear Lake C5	Blackfoot Res.	05/11 - 06/11/89 a	489,416 green eggs	63%	287,000	171,300[b] (6"+)	35%
Cutthroat/ C5	Mantua SFH, UT	10/17/89	129,030 fry (0-3")		129,030	127,705 (6"+)	99%
Rainbow/ R8	Egan SFH, UT	12/07/89	305,800 eyed eggs	89%	272,520	264,291 (4-6")	86%
Rainbow/ Hayspur R9	Hayspur SFH, ID	12/12/89	397,250 eyed eggs	85%	338,567	220,000[c] (6-9"+)	55%
Rainbow/ R8	Egan SFH, UT	12/28/89	224,275 eyed eggs	98%	219,810	205,000[c] (6-9"+)	91%
Splake/ MA x BK hybrid	Mantua SFH, UT	12/07/89	11,000 eyed eggs	91%	10,000	5,823 (6"+)	53%
Lake Trout/ MA	Mantua SFH, UT	12/28/89	1,200 eyed eggs	84%	1,000	788 (5"+)	66%
Cutthroat/	Blackfoot Res.	05/12 - 06/12/90	128,830 green eggs	52%	66,900	56,000[c] (6"+)	43%
Rainbow/ R9	Hayspur SFH, ID	11/15/90	346,800 eyed eggs	92%	320,000	300,000[c] (5"+)	87%
Rainbow/ R9	Hayspur SFH, ID	12/03/90	619,615 eyed eggs	91%	565,955	495,000[c] (6-9"+)	80%

[a]Carried over from previous year (see FY 89 report).
[b]Approximately 89,000 destroyed due to positive BKD test from spawning ovarian fluids (see FY 89 report).
[c]Anticipated total yield.

Table 4. Cost of fish production at Grace State Fish Hatchery, October 1, 1989 through December 31, 1990.

Species/strain	Pounds produced[a]	Number produced	Size (in.)	Total cost[b]	Percent of budget	Cost per pound	Cost per fish
Rainbow/R1 & R8	54,887[c]	--	8+	$61,950	30.0%	$1.13	
Rainbow/R1 & R8	10,416[c]	--	6-8	$14,450	7.0%	$1.39	
Cutthroat/C5	18,705[c]	--	6	$38,200	18.5%	$2.04	
Rainbow/R8 & R9	43,492	191,815	8+	$45,430	22.0%	$1.04	$0.24
Rainbow/R8 & R9	18,305	229,655	6-8	$20,650	10.0%	$1.13	$0.09
Rainbow/R8 & R9	9,065	275,000	3-6	$11,350	5.5%	$1.25	$0.04
Rainbow/R1 & R9	223	317,850	1-3	$ 1,050	0.5%	$4.63	$0.003
Cutthroat/C5	1,728	56,000	4-5	$10,320	5.0%	$5.98	$0.18
Splake/MA x BK	413	5,823	6	$ 2,685	1.3%	$6.50	$0.46
Lake Trout/MA	35	788	6	$ 415	0.2%	$11.80	$0.53
	157,269			$206,500			

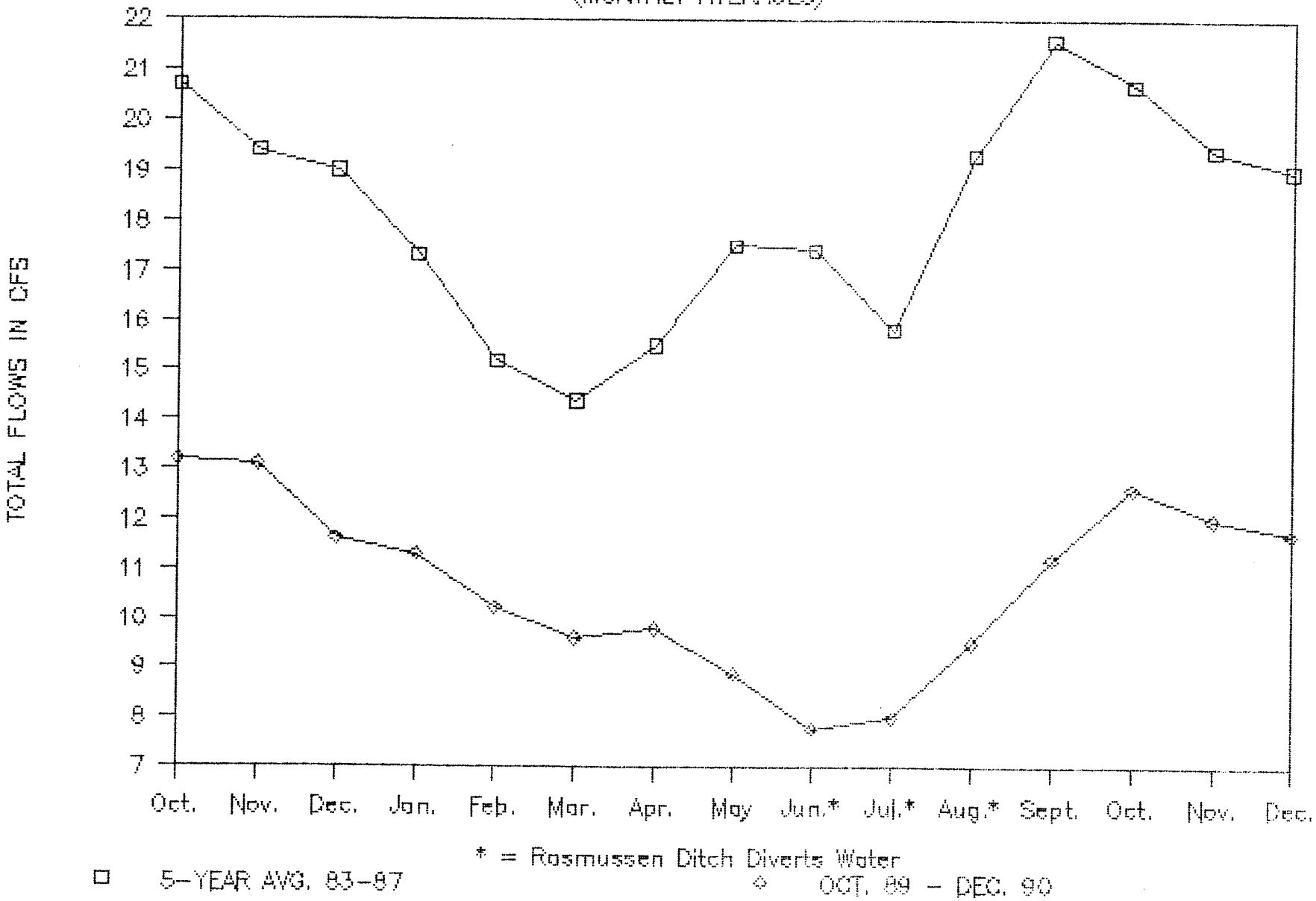
[a]Includes fish stocked or shipped, and fish remaining on station at the end of the report period.
[b]Total costs are based on proportions of the operating budgets for FY90 and FY91 ($206,500).
[c]Fish lots carried over from previous report year.

Table 5. Feed costs for all species of fish produced at Grace Hatchery. October 1, 1989 through December 31, 1990.

Species	Pounds produced	Pounds of Feed			Total feed cost	Feed conversion	Cost per pound
		Dry	Semi-moist	Total			
Rainbow	136,388	184,100	5,529	189,629	$46,340.74	1.39:1	$0.34
Cutthroat	20,433	10,503	10,207	20,710	$ 8,260.13	1.01:1	$0.40
Splake	413	408	71	479	$ 139.65	1.16:1	$0.34
Lake trout	35	49	32	81	$ 38.73	2.31:1	$1.11
TOTALS:	157,269	195,060	15,839	210,899	$54,779.25		

FIGURE 1. GRACE HATCHERY WATER FLOWS

(MONTHLY AVERAGES)



SPECIAL PROJECTS

St. Charles Creek Trapping

St. Charles Creek is a tributary of Bear Lake which flows through the town of St. Charles, Idaho. The mouth of the creek is very near the northwest corner of Bear Lake. Grace Hatchery annually operates **a** temporary fish trap near the mouth of St. Charles Creek to capture mature adult Bear Lake cutthroat trout. The purpose of this effort is to maintain a natural egg source of this unique stock of fish.

The trap was installed April 2, 1990, approximately 100 feet below the Transtrum Road culvert. This is the site of the permanent weir which is to be installed in 1991. The trap operated 61 days and was removed on June 1. No fish of any species were captured during this period, nor were any fish observed in the creek below the trap. Drought conditions are the obvious reason why no fish ran up St. Charles Creek in 1990. The lake level was very low and there was almost no spring freshet in the creek. As a result, the creek ran across 600 to 800 yards of mudflat before reaching the lake and was only 4 to 6 inches deep for most of that distance. Low water also made hunting easier for pelicans and herons, which were frequently observed near the mouth of the creek.

Utah Division of Wildlife Resources (UDWR) was able to capture 305 adult Bear Lake cutthroat at the Swan Creek facility in spite of the drought conditions. Bear Lake is deeper at the mouth of Swan Creek, so does not have the extensive mudflat for fish to cross. A total of 355,700 green cutthroat eggs were taken at Swan Creek, compared to 656,395 eggs in 1989. Grace Hatchery did not receive any Bear Lake cutthroat eggs or fry from Utah in 1990.

Little Blackfoot River Trap and Spawntake

Bear Lake cutthroat trout have been introduced to Blackfoot Reservoir, and mature adults return to the Little Blackfoot River to spawn. Grace Hatchery personnel have trapped and spawned these fish every year since 1986 in order to maintain the run (Table 6). Fingerling resulting from this operation are stocked back in the reservoir system the following spring. This stocking was done into the main Blackfoot River in 1989 and 1990 in order to transfer the run away from the Little Blackfoot River. Adult fish are expected to continue returning to the Little Blackfoot River for two to three more years.

A temporary trap was installed, approximately 300 feet above the mouth of the Little Blackfoot River, on April 23. The trap operated until June 13 (51 days). Morpholine was dripped into the river above the trap to attract imprinted fishes. A total of 203 adult Bear Lake cutthroat were captured (Table 7), including 108 males and 95 females (53.2% and 46.8%, respectively). The majority of both sexes were age 4+ fish with lengths *ranging* from 400 to 450 mm (Figures 2 and 3).

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Table 6. History of Bear Lake cutthroat spawning at the Little Blackfoot River trap (Grace Hatchery).

Year	Trap operation	Total fish captured (M/F)	First cutt in trap	Females spawned	Total green eggs	Percent eye-up	Fingerling produced	Percent survival[a]
1990	4/23 - 6/13	203 (108/95)	5/06	83	128,831	64.9%	56,000[b]	43%
1989	4/17 - 6/11	583 (261/327)	5/03	265	489,416	66.4%	171,480[c]	35%
1988	4/06 - 6/14	380 (143/237)	4/26	197	474,595	36.2%	87,000	18%
1987	4/15 - 6/03	1219 (443/776)	4/26	588	821,059	50.8%	[d]	
1986	5/28 - 6/08	806 (621/185)	[e]	142	190,806	26.0%	21,000	11%

[a]Calculated from green eggs to release.
[b]Estimated (fish still on hand at hatchery).
[c]90,000 destroyed due to possible contamination with BKD.
[d]Combined shortly after swimup with lots from Utah. Total yield for combined lots was 355,000 fingerling, or 72% survival from eyed egg to release.
[e]Trap in too late to capture earliest fish.

Table 7. Summary of Little Blackfoot River trap operations, April 23 through June 13, 1990.

Week	No. of Bear Lake cutthroat	Males/ females	Water temp. range (F)	Other fish
4/23-29	0	0/0	39-57	0
4/30-5/6	1	1/0	52-62	0
5/7-13	5	2/3	54-59	1 rainbow
5/14-20	13	7/6	54-60	0
5/21-27	94	57/37	53-62	2 Yellowstone cutthroat
5/28-6/3	58	30/28	55-59	1 Yellowstone cutthroat
6/4-10	28	10/18	55-60	1 Yellowstone cutthroat
6/11-13 (3 days)	4	1/3	55-58	0
TOTALS:	203	108/95	mean = 55.8[a]	1 rainbow **4 Yellowstone** cutthroat

[a]Mean temperature during the entire trapping operation. Mean during the spawning period (5/12 - 6/12) = 57.0°F.

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FIGURE 2. LITTLE BLACKFOOT TRAP--1990

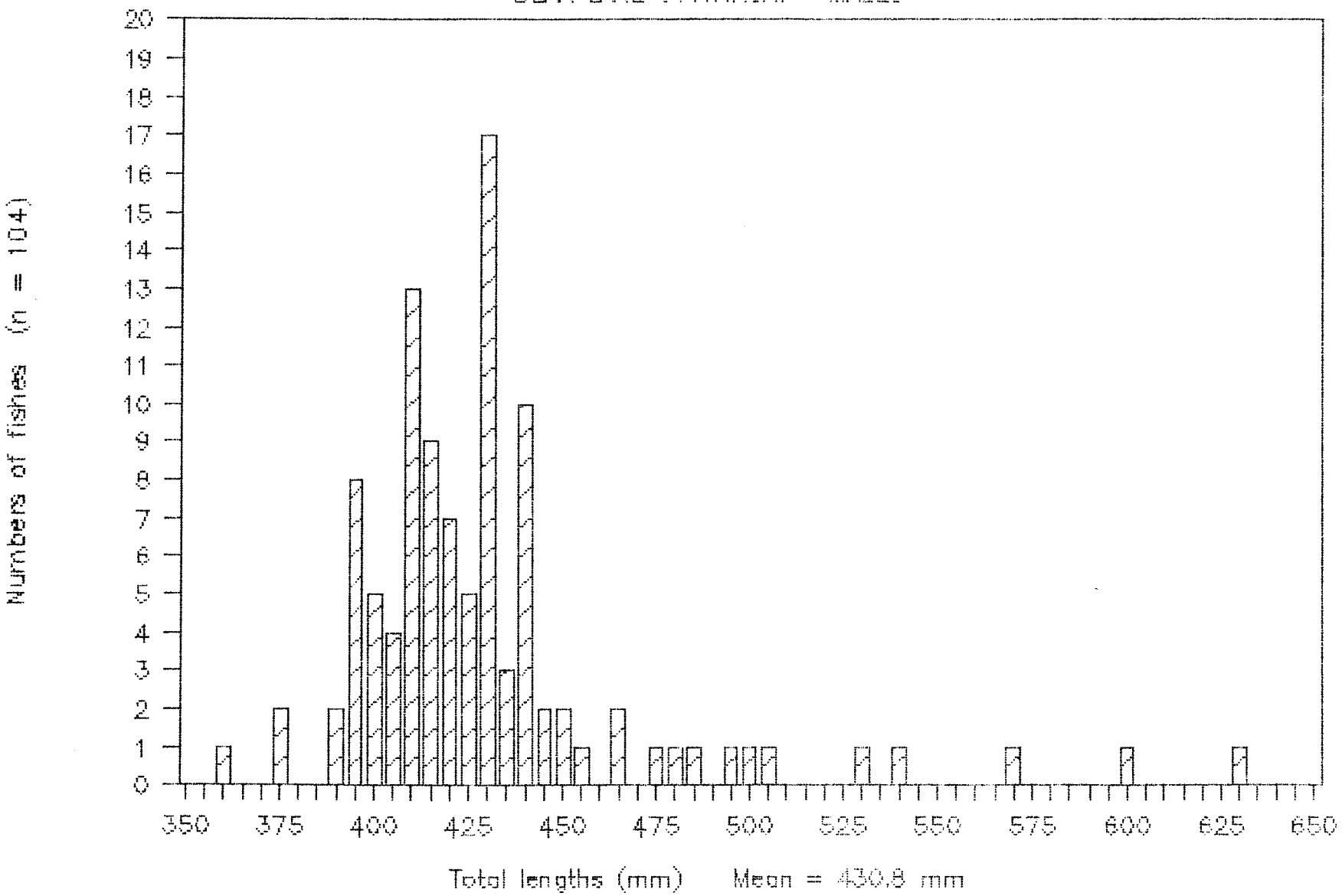
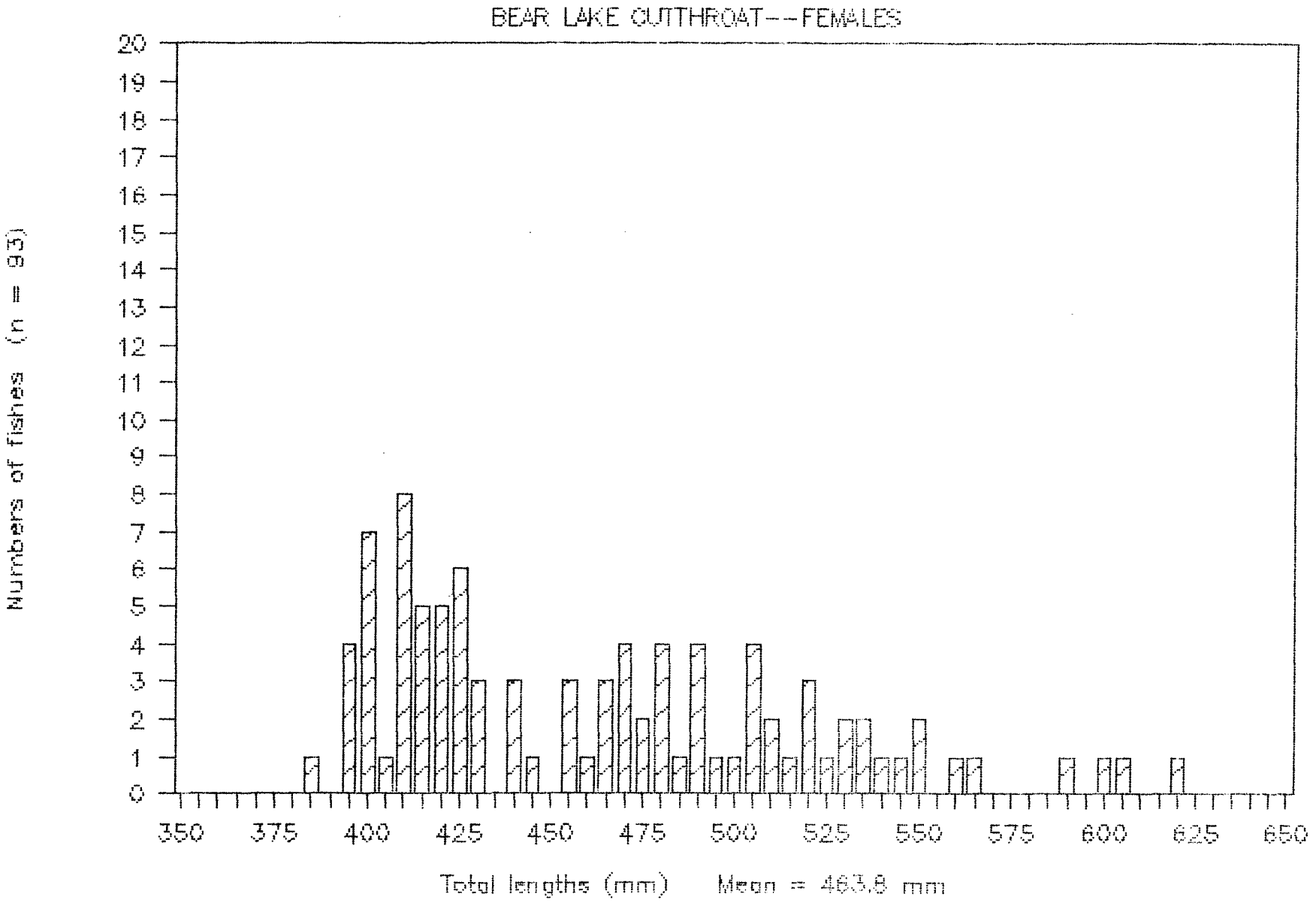


FIGURE 3. LITTLE BLACKFOOT TRAP--1990



Daily spawning operations began on April 23 and continued until June 12. Spawn was taken early each morning in order to work when daily water temperatures were lowest. A number of females entered the trap ripe and a few were overripe. All overripe eggs were discarded. A total of 83 females were spawned to produce 128,831 green eggs for an average of 1,552 eggs/female (Table 8). Survival to eye-up was **64.9%,** or 83,670 eggs. The final yield is expected to be about 56,000 fingerling (6 to 7 inches) to be stocked into Blackfoot Reservoir in 1991.

Ovarian fluid samples were taken from every female spawned, and 54 fish (27 males, 27 females) were sacrificed for tissue samples. All samples were shipped to the Eagle Fish Health Laboratory for analysis. Eggs from each daily spawntake were incubated separately in isolated Heath trays until results of the tests were known. All results were negative for the Infectious Hematopoietic Necrosis (IHN), IPN, and BKD pathogens (Table 2).

Main Blackfoot River Trap and Spawntake

The new floating weir and trap was put in operation for the first time. Personnel from the Engineering Bureau completed the installation on April 6, 1990. Roulon Thompson, a commercial fisherman from Jerome, Idaho operated the trap under the supervision of the Region 5 Fishery Manager. Grace Hatchery personnel helped by overseeing some of the operation as we traveled back and forth to the Little Blackfoot River site.

Rainbow trout were captured in the Blackfoot River trap, incidental to the cutthroat trout for which the trap was installed. Grace Hatchery personnel took spawn from these rainbow trout on three days; April 21, 27, and May 3. Seventeen females were spawned for a total of 42,638 green eggs (2,508 eggs/female). A total of 21,360 eggs survived to eye-up (50.1%). All eyed-eggs from the first two lots were sent to the McCall State Fish Hatchery (18,160 total). The third lot of eggs was kept to hatch at Grace Hatchery. The resulting 2,850 unfed fry were stocked in Meadow Creek, a tributary of Blackfoot Reservoir.

A total of 49 adult rainbow trout from the Blackfoot River trap, including those which were spawned, were sacrificed for disease sampling. Tissues and ovarian fluids were sent to the Eagle Fish Health Laboratory for analysis. All test results were negative (Table 2).

Other Proiects

All Bear Lake cutthroat trout fingerling at Grace Hatchery are adipose fin-clipped before release to comply with regional management plans. The coded wire tagging trailer was brought to the hatchery in February 1990 for use in fin-clipping the 1989 lots of cutthroat. A crew of six local people were hired to

Table 8. Summary of Bear Lake cutthroat spawning at the Little Blackfoot River trap by Grace Hatchery personnel, May 12 through June 12, 1990.

Date	Water temp. (F)	Females spawned	Number green eggs	Eggs per female	Number eyed eggs	Percent eye-up	Number hatched	Percent hatched
5/12	57	2	3,873	1,937	3,415	88.2	3,000	77.4
5/14	57	1	1,517	1,517	633	41.7	625	41.2
5/17	56	3	4,548	1,516	3,744	82.3	0[a]	0
5/19	57	2	1,740	870	0[a]	0	0	0
5/20	57	1	1,183	1,183	0[a]	0	0	0
5/22	57	3	4,550	1,517	3,777	83.0	3,210	70.5
5/23	57	7	11,408	1,630	2,900	25.4	2,465	21.6
5/24	58	9	13,226	1,470	9,882	74.7	8,155	61.7
5/25	54	1	400	400	371	92.8	352	88.0
5/26	54	3	4,728	1,576	3,045	64.6	2,893	61.2
5/27	55	2	1,957	979	1,562	79.8	1,484	75.8
5/28	56	7	8,910	1,273	7,290	81.8	6,926	77.7
5/29	55	7	11,742	1,677	6,380	54.3	4,147	35.3
5/30	56	1	1,344	1,344	125	9.3	50	3.7
5/31	56	8	10,725	1,341	7,293	68.0	4,740	44.2
6/01	55	4	6,900	1,725	6,041	87.6	5,739	83.2
6/02	55	5	8,722	1,744	4,171	47.8	3,754	43.0
6/04	55	1	1,972	1,972	1,330	67.4	300	15.2
6/05	55	1	2,000	2,000	1,670	83.5	1,300	65.0
6/06	55	3	5,136	1,712	4,573	89.0	4,000	77.9
6/07	56	4	8,560	2,140	5,447	63.6	4,356	50.9
6/08	54	3	4,455	1,485	3,645	81.8	2,550	57.2
6/09	55	3	5,340	1,780	3,286	61.5	2,460	46.1
6/11	56	1	1,305	1,305	870	66.7	600	46.0
6/12	55	1	2,590	2,590	2,220	85.7	1,554	60.0
	Totals:	83	128,831		83,670		64,660	
	Means:			1,552		64.9		50.2

[a] Incubator lines plugged and dewatered trays.

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do the clipping while the hatchery crew supervised, operated the trailer, and handled the fish. A total of 300,000 fish were clipped in five and one-half days.

The 1990 lot of Bear Lake cutthroat was fin-clipped in December 1990. The small size of the lot did not justify bringing in a clipping trailer, so a small-scale clipping table and transport system were built at the hatchery. Three experienced local people were hired, and 56,280 fish were clipped in three days.

A significant turnover in the permanent personnel at Grace Hatchery required considerable retraining and reevaluation of projects and procedures.

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